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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,148	10/22/2001	Joseph David Rigney	13DV13878	4144

31450 7590 03/24/2003

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EXAMINER

ROSENBAUM, IRENE CUDA

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 03/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaraj et al (5,723,078). Nagaraj et al teach a method of localized repair of turbine components having a surface with a damaged thermal barrier coating (column 4, lines 35-45) including cleaning (preferably by grit blasting) a spalled region of the exposed surface of the component (column 4, lines 46-51), texturing the exposed surface to produce an array of grooves (column 4, line 61- column 5, line 10), and depositing a replacement thermal barrier coating over substantially only the textured surface (column 5, line 21 – line 44). Nagaraj et al fail to state that the spacing, geometry, etc of the grooves is predetermined. However, it is common practice in mechanical manufacture to evaluate and optimize design characteristics prior to implementation and then to follow those design criteria and official notice is taken of such.

Nagaraj et al further fail to teach the particulars of the texturing apparatus (laser beam particulars or electron beam) and the particulars of the groove size and spacing. However, the particulars of the apparatus used to perform the texturing are considered apparatus limitations which do not materially effect the method performed and are considered to be routinely determined through design optimization. Further the

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shape , spacing , etc of the grooves are considered design limitations which would have been obvious to one of ordinary skill in the art at the time the invention was made since it is old and well known to optimize article design features through routine experimentation.

Furthermore whether it is the bond coat or the substrate which is textured would depend on the extent of damage and how much to remove , etc, would be obvious to one of ordinary skill in the art based on an observation of the damaged article.

The article of claim 27 inherently results from the method of Nagarj et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Cuda-Rosenbaum whose telephone number is 703-308-1792. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 308-1148. The fax phone numbers for the organization where this application or proceeding is assigned are 7033087058 for regular communications and 7033087058 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1148.

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March 21, 2003

*Jenk R*  
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